

**UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

Solas OLED Ltd., an Irish corporation,

*Plaintiff,*

vs.

Google Inc., a Delaware corporation;

*Defendant.*

CASE NO.

**Complaint for Patent  
Infringement**

**JURY DEMANDED**

**Complaint for Patent Infringement**

Plaintiff Solas OLED Ltd. (“Solas”) files this complaint against Defendant Google Inc. (“Google”), alleging infringement of U.S. Patent Nos. 6,072,450 and 7,446,338 (“Patents-in-Suit”). The accused products are Google Pixel smartphones containing active-matrix organic light-emitting diode (AMOLED) displays.

**Plaintiff Solas OLED and the Patents-in-Suit.**

1. Plaintiff Solas is a technology licensing company organized under the laws of Ireland, with its headquarters at 4-5 Burton Hall Road, Sandyford, Dublin 18.
2. Solas is the owner of U.S. Patent No. 6,072,450, entitled “Display Apparatus,” which issued June 6, 2000 (the “’450 patent”). A copy of the ’450 patent is attached to this complaint as Exhibit 1.

3. Solas is the owner of U.S. Patent No. 7,446,338, entitled “Display Panel,” which issued November 4, 2008 (the “’338 patent”). A copy of the ’338 patent is attached to this complaint as Exhibit 2.

**Defendant and the Accused Products.**

4. Defendant Google Inc. is a Delaware corporation with regular and established places of business in this district.

5. The Accused Products are Google Pixel smartphones containing active-matrix organic light-emitting diode (AMOLED) displays. As an illustrative example, this includes Google Pixel 3 XL model smartphones (illustrated below).



**Jurisdiction, venue, and joinder.**

6. Solas asserts claims for patent infringement against Google under the patent laws of the United States, including 35 U.S.C. §§ 271 and 281, et seq. The Court has original jurisdiction over Solas’ patent infringement claims under 28 U.S.C. §§ 1331 and 1338(a).

7. The Court has personal jurisdiction over Google. Google has regular and established places of business within this district and has committed acts of infringement within this district (e.g., selling and using Accused Products). Google has established minimum contacts

with the State of Texas such that the exercise of jurisdiction over Google would not offend traditional notions of fair play and substantial justice.

8. Venue is proper in this district under 28 U.S.C. §1400(b) and 28 U.S.C. §§ 1391(c). Google has regular and established places of business in this district at: 500 W. 2nd St, Austin, TX 78701 and 110 E Houston St #300, San Antonio, TX 78205.

**Count 1 – Claim for infringement of the '450 patent.**

9. Solas incorporates by reference each of the allegations in the above paragraphs and further alleges as follows:

10. On June 6, 2000, the United States Patent and Trademark Office issued U.S. Patent No. 6,072,450, entitled “Display Apparatus.” Ex. 1.

11. Solas is the owner of the '450 patent with full rights to pursue recovery of royalties for damages for infringement, including full rights to recover past and future damages.

12. Each claim of the '450 patent is valid, enforceable, and patent-eligible.

13. Solas and its predecessors in interest have satisfied the requirements of 35 U.S.C. § 287(a) with respect to the '450 patent, and Solas is entitled to damages for Google's past infringement.

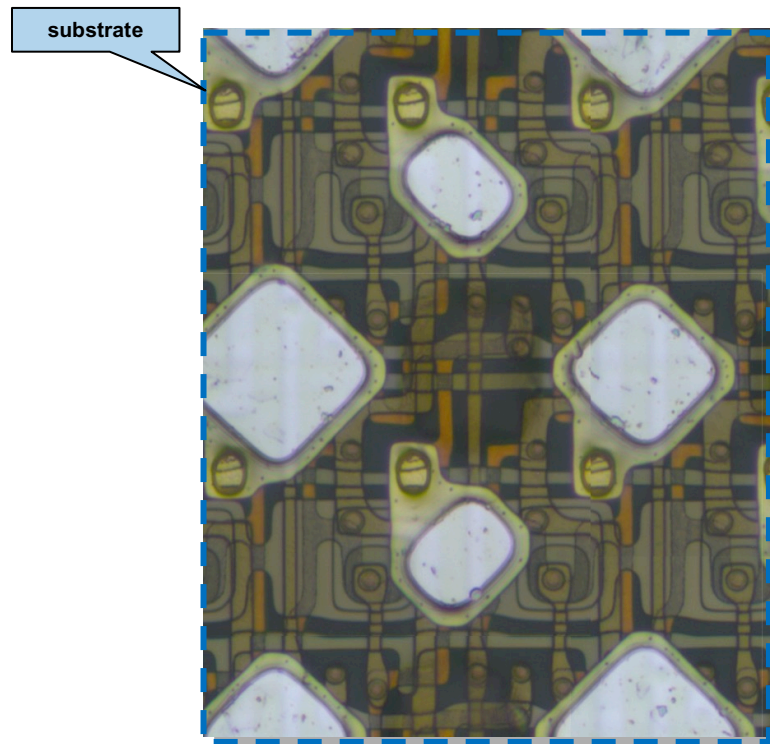
14. Google has directly infringed (literally and equivalently) and induced others to infringe the '450 patent and, unless enjoined, will continue to do so by making, using, selling, offering for sale, or importing products that infringe the claims of the '450 patent and by inducing others to infringe the claims of the '450 patent without a license or permission from Solas.

Direct Infringement

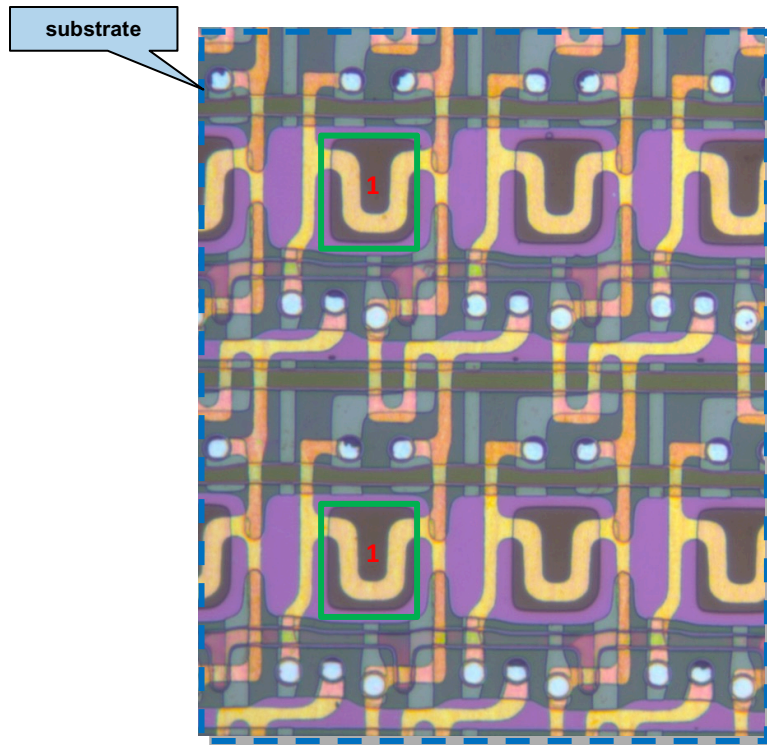
15. Google has directly infringed (literally and equivalently) at least one claim of the '450 patent by making, using, offering to sell, selling, and importing the Accused Products. Google has infringed multiple claims of the '450 patent, including independent claim 1. By way of example only, the Google Pixel infringes an exemplary claim of the '450 patent, as in the following description, which Solas provides without the benefit of information about the accused device obtained through discovery. For example, claim 1 claims a display apparatus as follows:

**[1a] “a substrate;”**

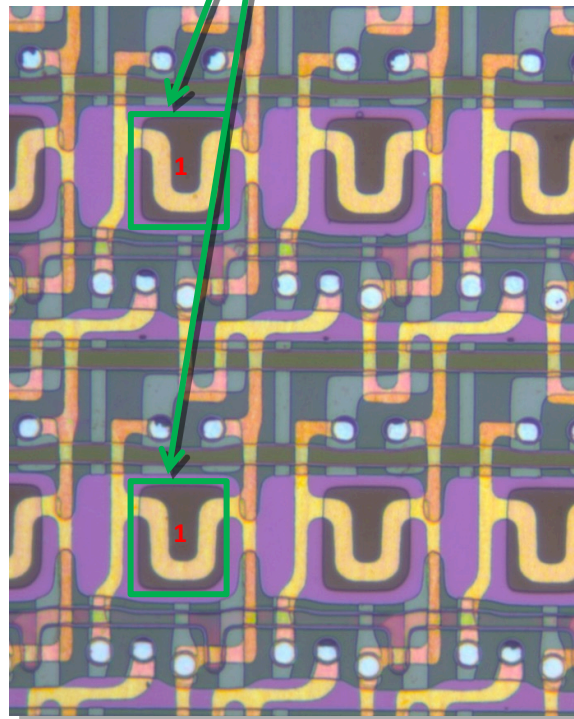
The accused Pixel phones include Organic Light Emitting Diode (OLED) panels that include a polyimide substrate:

**[1b] “active elements formed over said substrate and driven by an externally supplied signal;”**

The accused Pixel phones include active elements formed over the substrate:

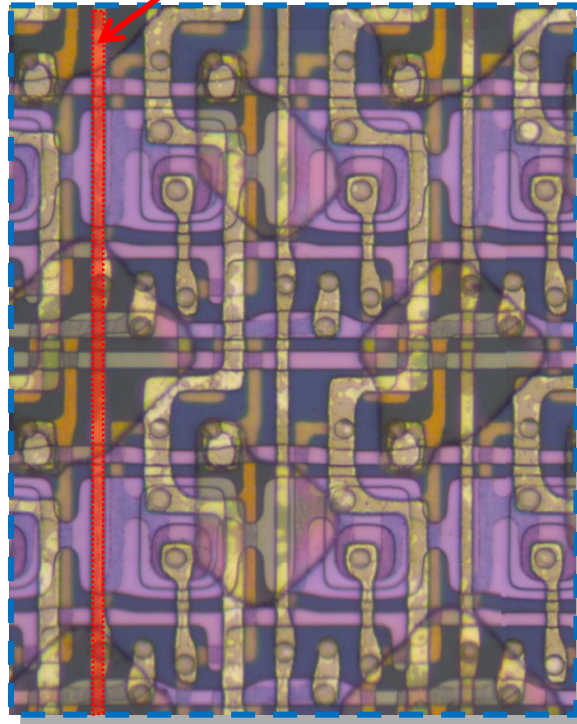


active elements formed over said substrate and driven by an externally supplied signal;



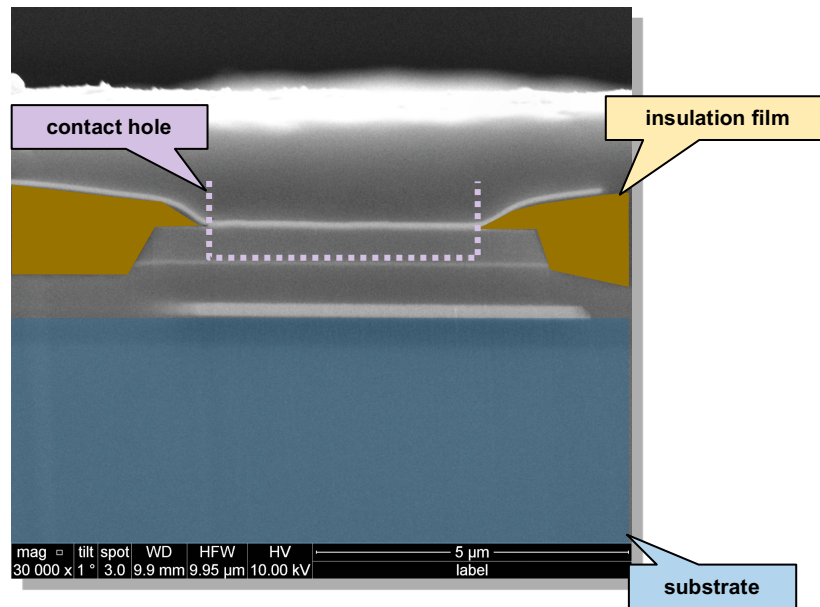
These active elements are driven by an externally supplied signal:

active elements formed over said substrate and driven by  
an externally supplied signal;



**[1c] “an insulation film formed over said substrate so as to cover said active elements, said insulation having at least one contact hole;”**

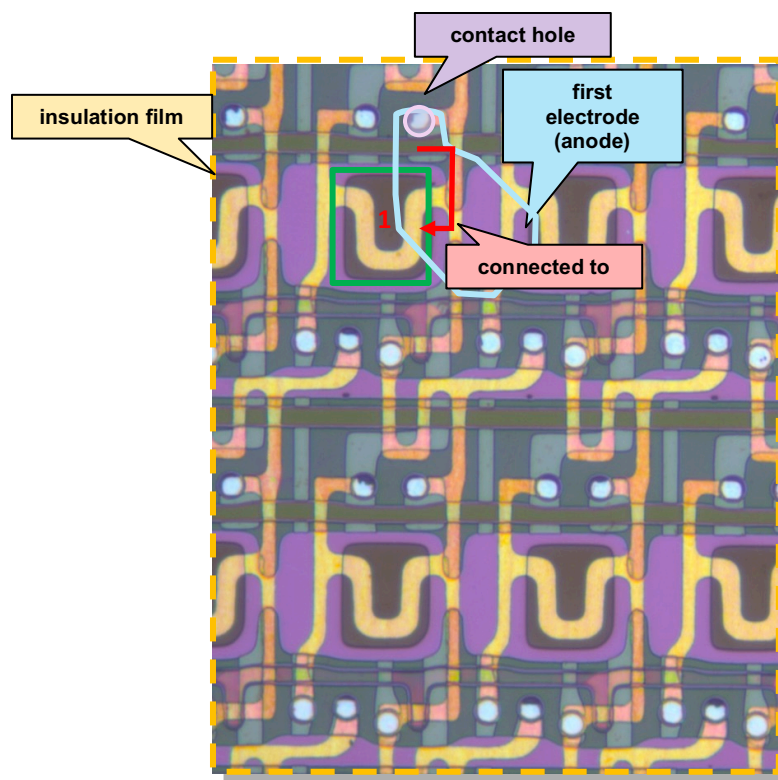
In the accused Pixel phones, an insulation film is formed over the substrate, covers the active elements, and has contact holes:



**[1d] “at least one first electrode formed on said insulation film so as to cover said active elements, and connected to said active elements through said at least one contact hole, said at least one first electrode being made of a material which shields visible light;”**

In the accused Pixel phones, an electrode is formed on the insulation film, covers active elements, and is connected to active elements through contact holes:



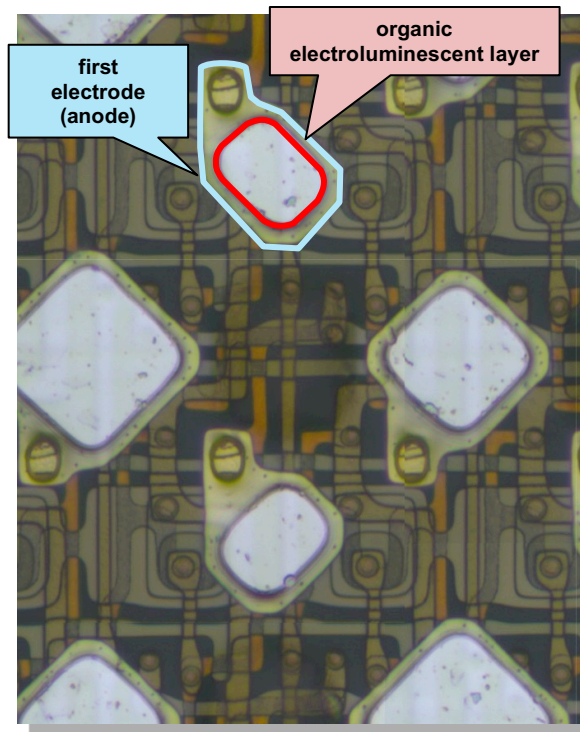


This electrode is formed of silver, which shields visible light.

**[1e] “an organic electroluminescent layer having an organic electroluminescent material formed on said at least one first electrode so as to cover said active elements and including at least one layer which emits light in accordance with a voltage applied to said at least one layer;”**

In the accused Pixel phones, a layer of organic electroluminescent material is formed on the electrode, and covers active elements:

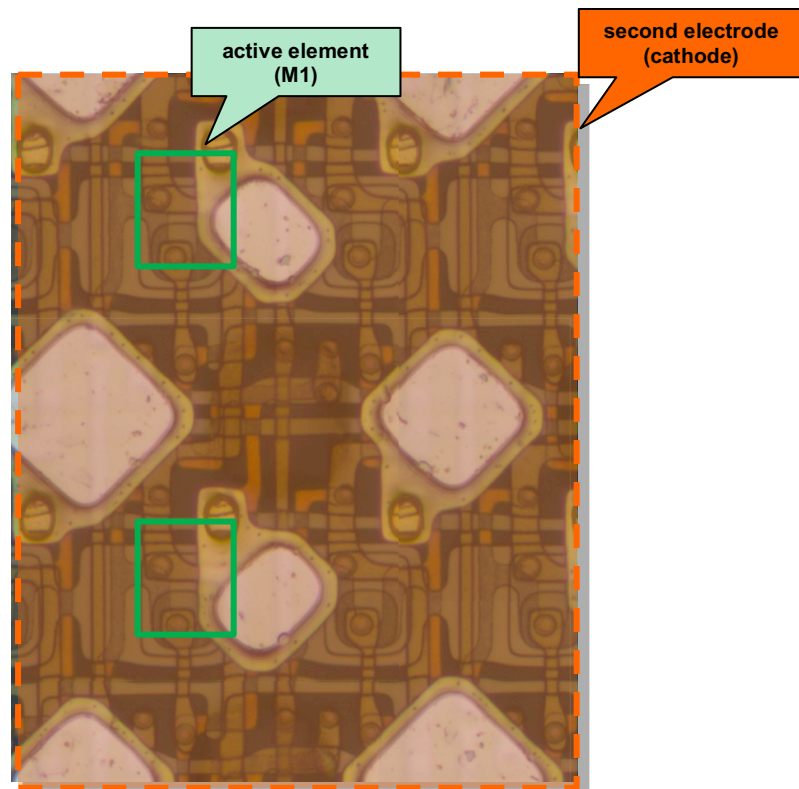




This organic electroluminescent layer emits in accordance with a voltage applied to the layer using the OLED cathode and anode.

**[1f] “and at least one second electrode formed on said organic electroluminescent layer which covers said active elements.”**

In the accused Pixel phones, a second electrode is formed on the organic electroluminescent layer:



#### Indirect infringement

16. Google has had knowledge of the '450 patent, from a date no later than the date it receives this complaint. Google has known how the Accused Products are made and has known, or have been willfully blind to the fact, that making, using, offering to sell, and selling the accused products within the United States, or importing the Accused Products into the United States, would constitute infringement.

17. Google has induced, and continues to induce, infringement of the '450 patent by actively encouraging others (including distributors and end customers) to use, offer to sell, sell, and import the Accused Products. On information and belief, these acts include providing information and instructions on the use of the Accused Products; providing information, education and instructions supporting sales by distributors; providing the Accused Products to distributors; and indemnifying patent infringement within the United States.

Damages

18. Solas has been damaged by Google's infringement of the '450 patent and is entitled to damages as provided for in 35 U.S.C. § 284, including reasonable royalty damages.

**Count 2 – Claim for infringement of the '338 patent.**

19. Solas incorporates by reference each of the allegations in the above paragraphs and further alleges as follows:

20. On November 4, 2008, the United States Patent and Trademark Office issued U.S. Patent No. 7,446,338, entitled "Flexible touch sensor." Ex. 2.

21. Solas is the owner of the '338 patent with full rights to pursue recovery of royalties for damages for infringement, including full rights to recover past and future damages.

22. Each claim of the '338 patent is valid, enforceable, and patent-eligible.

23. Solas and its predecessors in interest have satisfied the requirements of 35 U.S.C. § 287(a) with respect to the '338 patent, and Solas is entitled to damages for Google's past infringement.

24. Google has directly infringed (literally and equivalently) and induced others to infringe the '338 patent and, unless enjoined, will continue to do so by making, using, selling, offering for sale, or importing products that infringe the claims of the '338 patent and by inducing others to infringe the claims of the '338 patent without a license or permission from Solas.

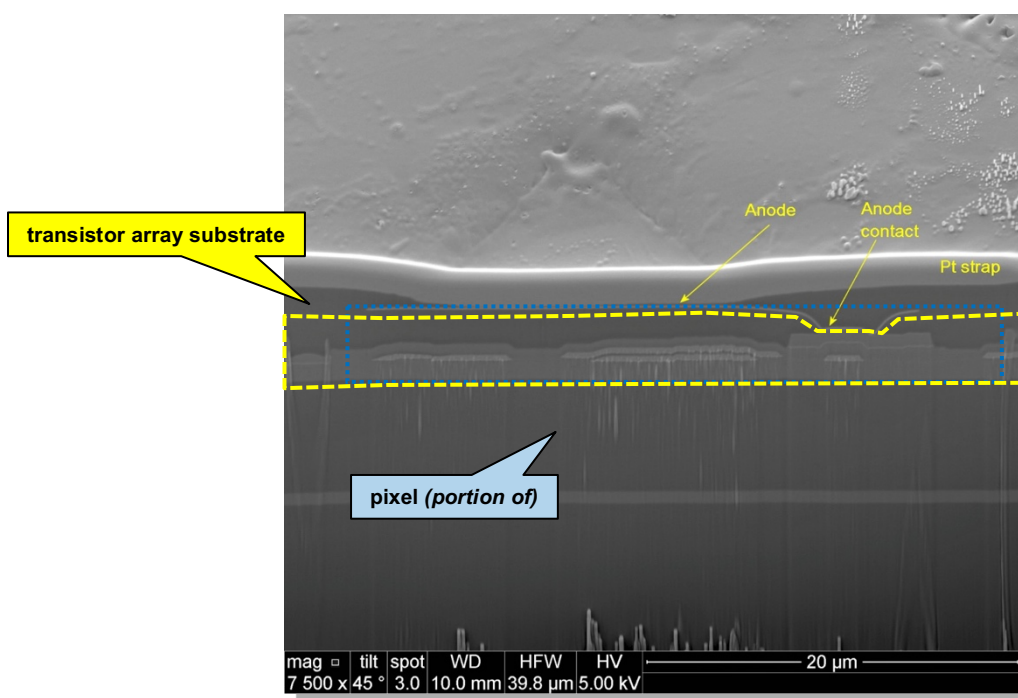
Direct Infringement

25. Google has directly infringed (literally and equivalently) at least one claim of the '338 patent by making, using, offering to sell, selling, and importing the Accused Products. Google has infringed multiple claims of the '338 patent, including independent claim 1. By way

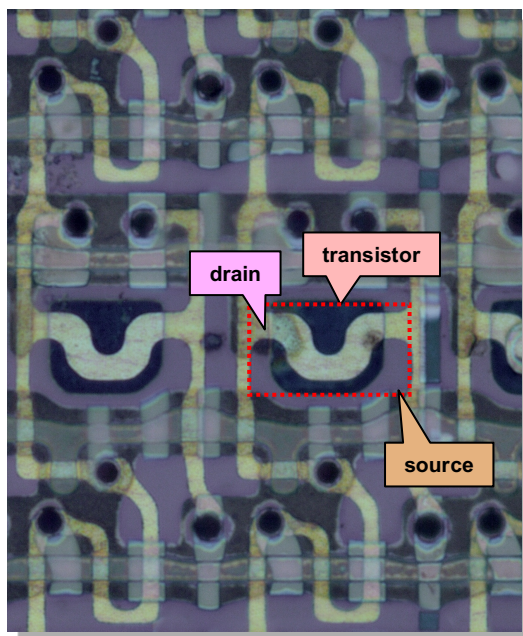
of example only, the Google Pixel 3XL infringes an exemplary claim of the '338 patent, as in the following description, which Solas provides without the benefit of information about the accused device obtained through discovery. For example, claim 1 claims a display apparatus as follows:

**[1a] “a transistor array substrate which includes a plurality of pixels and comprises a plurality of transistors for each pixel, each of the transistors including a gate, a gate insulating film, a source, and a drain;”**

The accused Google Pixel 3XL contains a transistor array substrate:

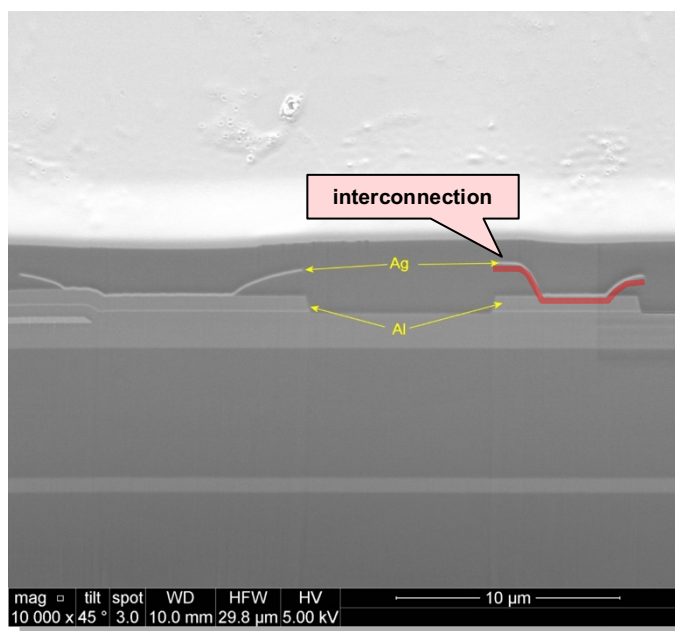


The transistor array substrate includes a plurality of pixels and comprises a plurality of transistors for each pixel, each of the transistors including a gate, a gate insulating film, a source, and a drain:



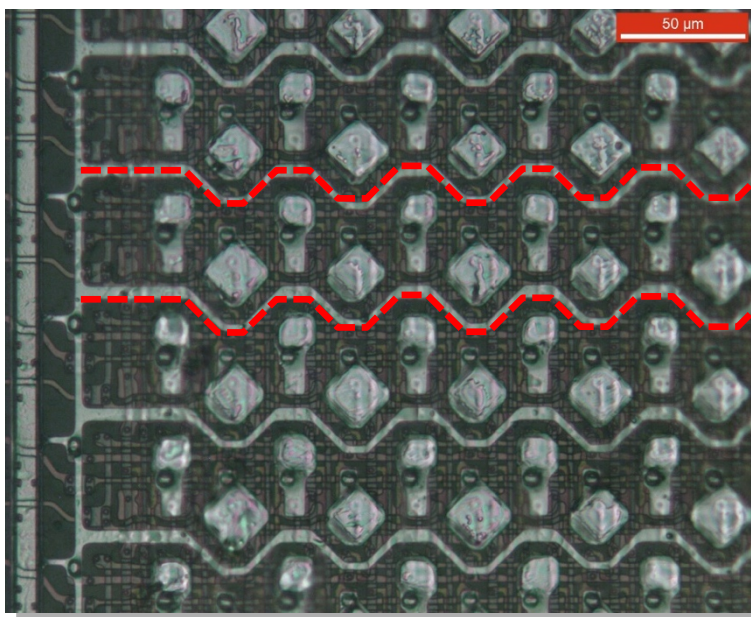
**[1b] “a plurality of interconnections which are formed to project from a surface of the transistor array substrate, and which are arrayed in parallel to each other;”**

The accused Google Pixel 3XL includes a plurality of interconnections which are formed to project from a surface of the transistor array substrate:



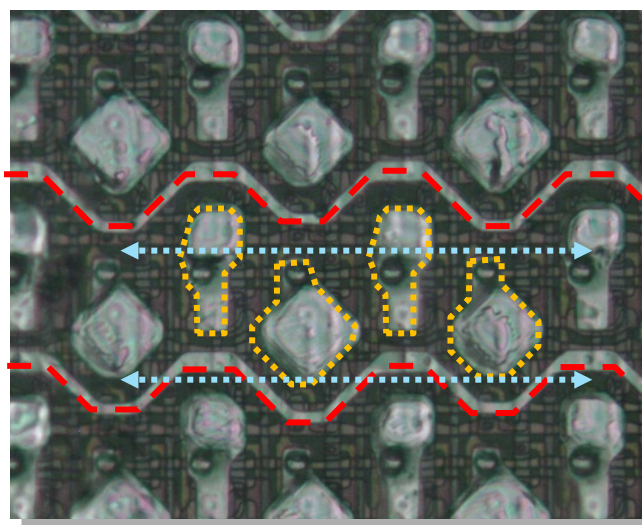
These interconnections are arrayed in parallel to each other:





**[1c] “a plurality of pixel electrodes for the plurality of pixels, respectively, the pixel electrodes being arrayed along the interconnections between the interconnections on the surface of the transistor array substrate;”**

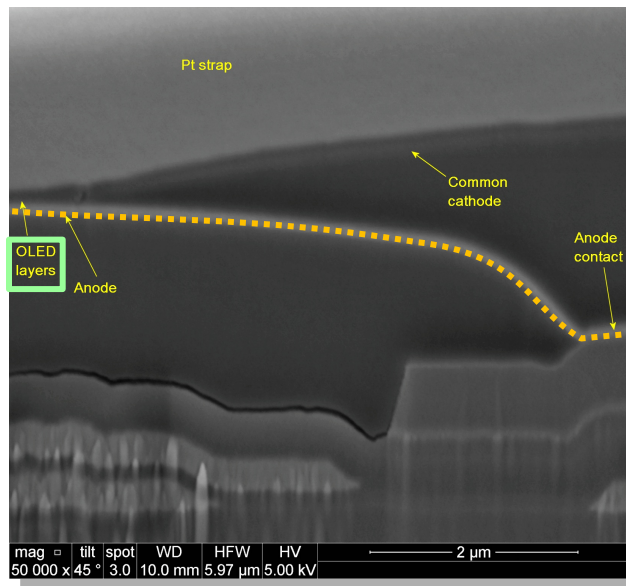
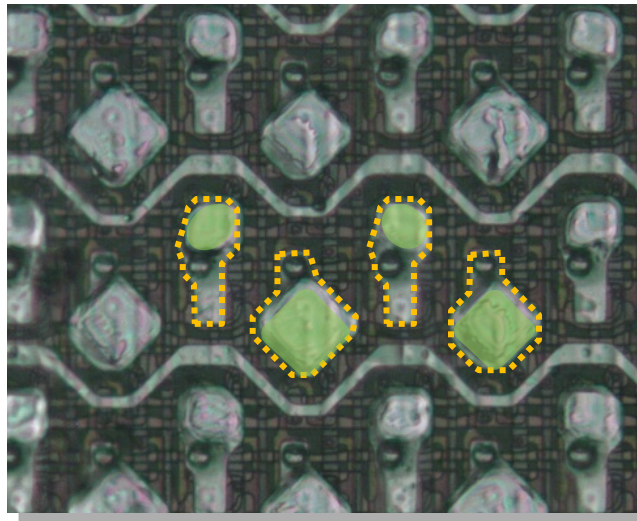
The accused Google Pixel 3XL includes a plurality of pixel electrodes for the plurality of pixels, respectively, the pixel electrodes being arrayed along the interconnections between the interconnections on the surface of the transistor array substrate:





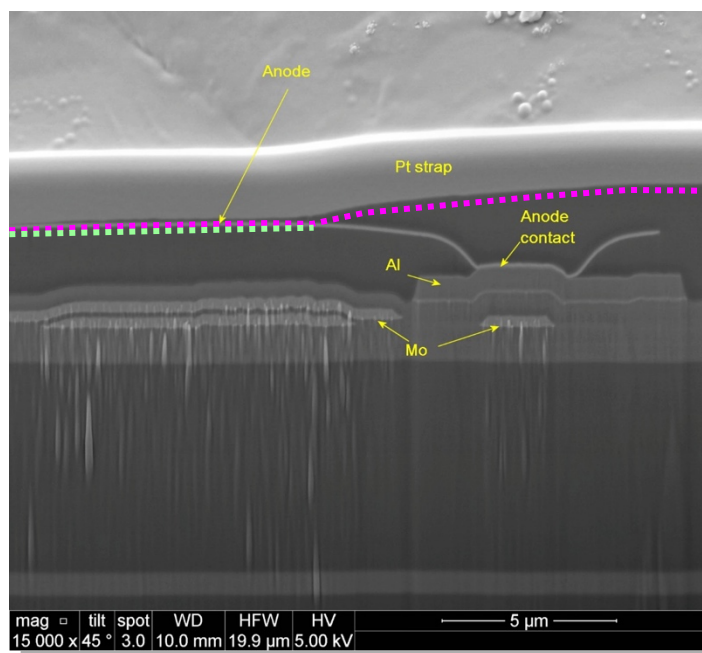
**[1d] “a plurality of light-emitting layers formed on the pixel electrodes, respectively;”**

The accused Google Pixel 3XL includes a plurality of light-emitting layers formed on the pixel electrodes, respectively:



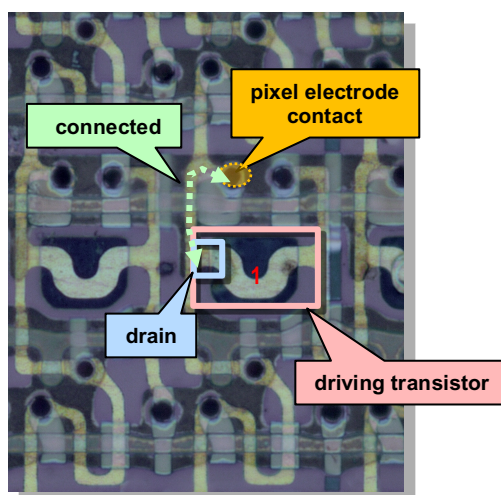
**[1e] “and a counter electrode which is stacked on the light-emitting layers,”**

The accused Google Pixel 3XL includes a counter electrode which is stacked on the light-emitting layers:

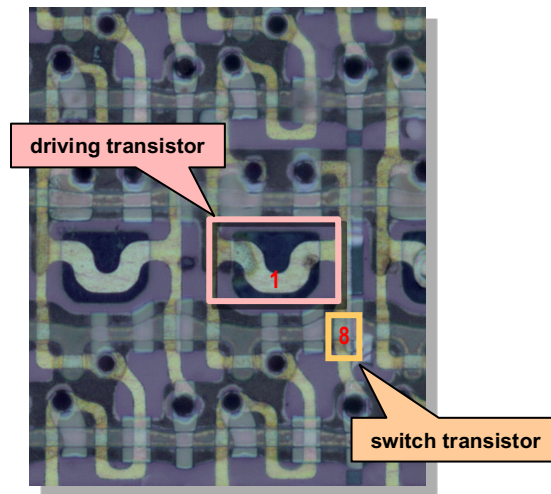


[1f] “wherein said plurality of transistors for each pixel include a driving transistor, one of the source and the drain of which is connected to the pixel electrode, a switch transistor which makes a write current flow between the drain and the source of the driving transistor, and a holding transistor which holds a voltage between the gate and source of the driving transistor in a light emission period.”

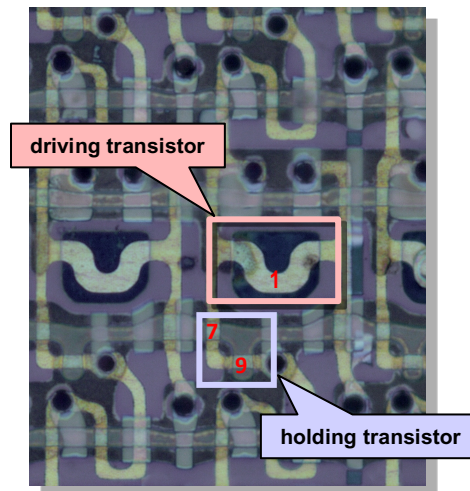
In the accused Google Pixel 3XL, the plurality of transistors for each pixel includes a driving transistor, one of the source and the drain of which is connected to the pixel electrode:



The plurality of transistors includes a switch transistor which makes a write current flow between the drain and the source of the driving transistor:



The plurality of transistors includes a holding transistor which holds a voltage between the gate and source of the driving transistor in a light emission period:



### Indirect infringement

26. Google has had knowledge of the '338 patent, from a date no later than the date it receives this complaint. Google has known how the Accused Products are made and has known, or have been willfully blind to the fact, that making, using, offering to sell, and selling the

accused products within the United States, or importing the Accused Products into the United States, would constitute infringement.

27. Google has induced, and continues to induce, infringement of the '338 patent by actively encouraging others (including distributors and end customers) to use, offer to sell, sell, and import the Accused Products. On information and belief, these acts include providing information and instructions on the use of the Accused Products; providing information, education and instructions supporting sales by distributors; providing the Accused Products to distributors; and indemnifying patent infringement within the United States.

Damages

28. Solas has been damaged by Google's infringement of the '338 patent and is entitled to damages as provided for in 35 U.S.C. § 284, including reasonable royalty damages.

**Jury demand.**

29. Solas demands trial by jury of all issues.

**Relief requested.**

Solas prays for the following relief:

A. A judgment in favor of Solas that Google has infringed the '450 patent and the '338 patent and that the '450 patent and the '338 patent are valid, enforceable, and patent-eligible;

B. A judgment and order requiring Google to pay Solas all damages provided for under 35 U.S.C. § 284, including compensatory damages, costs, expenses, and pre- and post-judgment interest for its infringement of the asserted patents;

D. A permanent injunction prohibiting Google from further acts of infringement of the '450 patent and the '338 patent;

E. A judgment and order requiring Google to provide an accounting and to pay supplemental damages to Solas, including, without limitation, pre-judgment and post-judgment interest;

F. A finding that this case is exceptional under 35 U.S.C. § 285, and an award of Solas' reasonable attorney's fees and costs; and

G. Any and all other relief to which Solas may be entitled.

Dated: August 30, 2019

Respectfully submitted,

/s/ Reza Mirzaie

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